

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. <i>(If applicable)</i>	
6. ISSUED BY		CODE		7. ADMINISTERED BY <i>(If other than Item 6)</i>		CODE	
8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i>				(X)		9A. AMENDMENT OF SOLICITATION NO.	
						9B. DATED <i>(SEE ITEM 11)</i>	
						10A. MODIFICATION OF CONTRACT/ORDER NO.	
						10B. DATED <i>(SEE ITEM 11)</i>	
CODE		FACILITY CODE					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

- ☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
- (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES <i>(such as changes in paying office, appropriation date, etc.)</i> SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER <i>(Specify type of modification and authority)</i>

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER <i>(Type or print)</i>		16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
<i>(Signature of person authorized to sign)</i>		<i>(Signature of Contracting Officer)</i>	

SECTION 16794

COAXIAL CABLE DATA TRANSMISSION MEDIA
AM #0004

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

47 CFR 15 Radio Frequency Devices

DEPARTMENT OF DEFENSE (DOD)

DOD 3235.1 (Rev H) Test & Evaluation of System
Reliability, Availability and
Maintainability - A Primer

ELECTRONIC INDUSTRIES ASSOCIATION (EIA)

EIA 170 (1957) Electrical Performance Standards -
Monochrome Television Studio Facilities

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C62.41 (1991) Surge Voltages in Low-Voltage AC
Power Circuits

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA 250 (1991) Enclosures for Electrical Equipment
(1000 Volts Maximum)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (1990; Errata) National Electrical Code

RURAL UTILITIES SERVICE (RUS)

RUS REA PE-60 (1979) Trunk Carrier Systems

RUS REA PE-80 (1979; Rev Oct 1982) Gas Tube Surge
Arresters

1.2 SYSTEM DESCRIPTION

1.2.1 General

Coaxial cable data transmission media (DTM) for analog or digital communications shall be provided as specified. [AM004] All computing devices, as defined in 47 CFR 15, shall be certified to comply with the requirements for Class A computing devices and labeled as set forth in 47 CFR 15.

1.3 DELIVERY OF TECHNICAL DATA AND COMPUTER SOFTWARE

1.3.1 Group I Technical Data Package

1.3.1.1 Manufacturers' Data

The data package shall include manufacturers' data for all materials and equipment provided under this specification.

1.3.1.2 Certifications

All specified manufacturer's certifications shall be included with the data package.

1.3.2 Group II Technical Data Package

The Contractor shall verify that site conditions are in agreement with the design package. The Contractor shall submit a report to the Government documenting changes to the site, or conditions that affect performance of the system to be installed. For those changes or conditions which affect system installation or performance, provide (with the report) specification sheets, or written functional requirements to support the findings, and a cost estimate to correct the deficiency. The Contractor shall not correct any deficiency without written permission from the Government.

1.4 ENVIRONMENTAL REQUIREMENTS

Cable to be used indoors shall be rated for continuous operation under ambient environmental conditions of 0 to 50 degrees C dry bulb and 10 to 95 percent humidity, noncondensing. Cable to be used outdoors shall be rated for continuous operation under ambient environmental conditions of minus 40 to plus 70 degrees C and humidity of up to 100 percent condensing or as normally encountered for the installed location.

PART 2 PRODUCTS

2.1 CABLE

2.1.1 Flexible and Semirigid Coaxial Cable

The coaxial cable shall have a characteristic impedance of 75 ohms plus or minus 3 ohms. All cable components shall be able to withstand the environment the cable is installed in for a minimum of 20 years. Coaxial cable shall meet the following requirements:

COAXIAL CABLE PARAMETERS
TYPE RG-6U

Inner Conductor:	18 American wire Gauge Solid copper wire Nominal Overall diameter of 0.82 mm Nominal Direct Current Resistance at 20 degrees C of 19.9 ohms per km Elongation of 1 percent minimum
Dielectric Core:	Solid Polyethylene Nominal Diameter of 4.57 mm
Outer Conductor:	Single braid of 33 American Wire Gauge bare copper wire 100 percent shield coverage minimum
Jacket: Polyvinylchloride	Black, Non-contaminating (PVC) Nominal diameter of 6.86 mm
Velocity of Propagation:	76 percent nominal
Eccentricity:	10 percent maximum
Capacitance:	56.8 picofarads per m, maximum

2.1.2 Protective Coverings and Cable Jackets

Protective coverings and cable jackets in any single length of cable shall be continuous and of the same material. The protective coverings shall be free from holes, splits, blisters, and other imperfections. The covering shall be flame retardant, moisture resistant, nontoxic, and electrically nonconductive.

2.2 CABLE CONNECTORS

2.2.1 Flexible and Semirigid

Connectors for RG/6U coaxial cable shall be bayonet connectors (BNC). Connectors shall be either crimp-on or solder type.

2.3 CONDUIT

Conduit as specified in Section 16415 ELECTRICAL WORK, INTERIOR and Section 16375 ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND and as shown shall be furnished.

2.4 ENCLOSURES

Metal enclosures shall be provided as needed for equipment not housed in racks or supplied with a housing. Enclosure finish color shall be manufacturer's standard, unless otherwise indicated. The enclosures shall be as specified or shown.

2.4.1 Interior

Enclosures used in an interior environment shall meet the requirements of NEMA 250, Type 12.

2.4.2 Exterior

Enclosures used in an exterior environment shall meet the requirements of NEMA 250, Type 4.

2.5 [AM004] Deleted

2.5.1 [AM004] Deleted

2.5.2 [AM004] Deleted

PART 3 EXECUTION

3.1 INSTALLATION

System components and appurtenances shall be installed in accordance with the manufacturer's instructions and as shown. All necessary interconnections, services, and adjustments required for a complete and operable DTM system shall be provided.

3.1.1 Enclosure Penetrations

Enclosure penetrations shall be from the bottom unless the system design requires penetrations from other directions. Penetrations of interior enclosures involving transitions of conduit from interior to exterior, and all penetrations on exterior enclosures shall be sealed with rubber silicone sealant to preclude the entry of water. The conduit riser shall terminate in a hot-dipped galvanized metal cable terminator. The terminator shall be filled with an approved sealant as recommended by the cable manufacturer, and in such a manner that the cable is not damaged.

3.1.2 Interior Electrical Work

Interior electrical work shall be installed as specified in Section 16415 ELECTRICAL WORK, INTERIOR and as shown.

3.2 TESTING

3.2.1 General

Personnel, equipment, instrumentation, and supplies necessary to perform all testing shall be provided.

3.2.2 Contractor's Field Test

The Contractor shall verify the complete operation of the data transmission system during the Contractor's field testing. Tests of video coaxial cable transmitting analog signals shall include testing each circuit for continuity and verification that each circuit passes a full bandwidth signal that complies with EIA 170. A report containing results of the field test shall be prepared and submitted.

3.2.3 Performance Verification Test and Endurance Test

The coaxial data transmission system procured and installed as part of a complete system shall be tested as a part of the completed system during the Performance Verification Test and Endurance Test.

-- End of Section --